3-MEGATON BLAST SET OFF BY CHINA, U.S. AGENCY SAYS

Explosion, Believed to Be Thermonuclear, Marks the Resumption of Testing

By BERNARD GWERTZMAN
Special to The New York Times

WASHINGTON, Dec. 27—Communist China was reported to have resumed its nuclear testing program today with the explosion in the atmosphere of a device—presumably thermonuclear—having a yield of three megatons.

The Atomic Energy Commission announced that it had detected the blast early this morning and said it originated in the Lop Nor testing area in Sinkiang Province in northwestern China.

The agency said the explosion, the eighth detected by the United States since China's testing began in October, 1964, was "about the same" as the sixth test, which took place on June 17, 1967.

No Data on Fallout

That explosion, also of three megatons, the equivalent of three million tons of TNT, was officially described by the United States and China as Peking's first thermonuclear, or hydrogen, device.

Officials said they had no information yet on fallout created by today's explosion. They said they saw no reason to believe the blast was connected with the Apollo 8 flight.

They noted that China had set off explosions at about this time for the last three years. The explosion might be related to Mao Tse-tung's birthday, which falls on Dec. 26—he was 75 yesterday. But within China no official mention is ever made of Mr. Mao's birthday.

'Slowdown' in Program

China's last recorded test took place on Christmas Eve 1967, and was believed to have been an attempt at a thermonuclear detonation. But A.E.C. officials later said that the necessary reaction did not take place, and only the atomic "trigger" exploded, with a yield of 20 kilotons—the equivalent of 20,000 tons of TNT. Officials said they thought that that blast was a technical failure.

A hydrogen bomb's energy comes from the fusion of small atomic nuclei at very high temperatures, while an atomic

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bomb releases energy derived from the fission, or splitting, of nuclei.

Throughout this last year there has been considerable speculation on the reasons for an apparent slowdown in China's program.

Some analysts believed that the Cultural Revolution in China—with its political upheavals and purges — might now have begun to interfere with the work of nuclear scientists. Others suggested that there might be technical snags.

Today's blast would indicate that the program has been proceeding, if at a slower pace.

China, which has refused to sign the treaty banning all but underground nuclear explosions, announced its first six explosions with great enthusiams, but said nothing about the seventh — or — "duo" — detonation. As of late this afternoon, China had announced nothing publicly about today's explosion, leading to curiosity among officials here.

They wondered if anything had gone wrong with the test or if China had adopted a "no publicity" policy.

Announcement by Agency

The A.E.C.'s short announcement said:

"The United States Atomic Energy Commission announced today the detection of a Chinese Communist atmospheric nuclear test, which took place in the 'Lop Nor' area about 2:30 A.M. E.S.T. Dec. 27. This is the eighth Chinese Communist atmospheric nuclear test detected by the United States.

"The detonation had a yield of about three megatons, about the same as the sixth Chinese test, which took place on June 17, 1967."

It was too soon, officials said, to give a more detailed analysis of today's explosion. But the magnitude of the blast indicated, they said, that it was thermonuclear.

China's first explosion, on Oct. 16, 1964, was a low-yield atomic device, similar in force to the first United States atomic bomb dropped over Hiroshima in 1945, with a force of 20 kilotons—the equivalent of 20,000 tons of TNT. It was believed to have been detonated from a tower.

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warhead was apparently tested on a 400- to 500-mile missile. Two months later, on Dec. 27, 1966, a device of "a few hundred kilotons" was tested on a tower and there was additional evidence of thermonuclear ingredients.

The joint Congressional Committee on Atomic Energy said in August, 1967, that China was making "rapid progress" in thermonuclear design and in developing delivery vehicles for weapons in the megaton range.

It said that "progress has been more rapid and surprisingly more effective than had been expected or indeed predicted."

Because of this development, the United States has made plans to begin the deployment of an antiballistic missile system to guard against possible Chinese attack in the nineteen-seventies.

If today's blast was similar to the last thermonuclear one, it probably was of the three-stage, or fission-fusion-fission, type, involving the use of enriched uranium (U-235), lithium-6, and natural uranium (U-238). It is believed that the June, 1967, device was dropped from an airplane.

The second dev
14, 1965, was abo
the magnitude of the first one, and was believed to have been dropped from an airplane.

The third test, om May 9, 1966, was more than 200 kilotons in magnitude and contained the first detectable thermonuclear ingredients, indicating progress toward a hydro-

27, 1966, a low-yield